



## The knowledges and their representations

An important aspect on the inclusion of local cultures in classrooms is their factual correspondence to reality. Based on studies carried out in Trinidad Tobago, June George mentioned that this requires attention, dedication and responsibility and there is no expectative that science teachers do it by themselves (George, 1992, p. 107). However, even if done rigorously, the representation of a given culture is always problematic and requires discussion. McKinley & Stewart (2012), for example, mentioned to happen distortions in the treatment of indigenous culture by science teachers in New Zealand, which assume the form of caricatures, is seen superficially and detached from its cultural, historical, social and political contexts. What comes to be a "representation" and what can we do to solve this problem?

When we refer to the identity of a subject, we must bear in mind that it is very difficult to have a complete or whole insight, because our gaze is limited and cannot perceive it fully; it will always miss something or some part will remain invisible. Thus, it is more appropriate to talk in creating an "image of the subject or of its identity". However, this image is no longer the subject or his identity, but a representation. This implies the existence of a certain type of transformation of the subject in this process.

“(…) the subject cannot be apprehended without the absence or invisibility that constitutes it – ‘as even now you look/but never see me’ – so that the subject speaks, and is seen, from where it is *not*”. (Bhabha, 1994, p. 47).

In the best hypothesis, it is like seeing the glassy reflection of someone in the mirror – a mimesis of the reality in the words of Homi Bhabha (1994, p. 48), or its imitation, copy, reproduction or representation. The concept of *mimesis* is old and dates back to the times of the Greek philosophers and their discussions on the reproduction of pre-existing objects by works of art (imitation of reality). Speaking otherwise, the image is a re-presentation by someone and it is limited, incomplete and markedly influenced by the author’s point of view.

A way to solve this problem is to recognize that the access to the subject and its identity (or knowledge) is only possible if we deny any sense of originality or completeness and assume that its displacement will always produce an illusion or fragmentation containing absences and losses (Bhabha, 1994, p. 51). This should be taken into account in the analysis of the knowledge of the women from Minas Gerais on the ash soap and of Mr. Zé, Mrs. Ná on the orange wine. As much as the fieldwork and writing

on these knowledges have been rigorous and insightful, they remain incomplete, as they do not catch these realities completely. Besides, they do not represent the totality of the manifestations of local cultural knowledges.

The same can be said for the scientific knowledge presented in the hybrid narratives. If we analyze the language of science, for example, we will see that it is much more rich and diverse, including graphics, schematic representations, images and other forms of communication that are not present in the narratives. Maybe the best form to analyze the scientific language is to read scientific articles. Beyond the language issue, a broader and deeper insight into the nature of science requires the analysis of authentic cultural contexts of scientific research and in the case of the hybrid narratives on the ash soap and the orange wine the cultural context was not this one.

The teacher who wish to insert local cultural knowledge into classes has to be aware of the limitations of this process and to aware students: the knowledge's transportation always imply in transformations with losses and absences. In the other hand, even knowing that it will not be possible to insert them fully in classrooms, teachers must pay attention to the problem of the knowledge's distortion or expression in the form of caricatures and pay attention to the existing connections with relevant aspects. It is not only to see what a community person knows or produces in isolation, but to consider the historical, social, cultural, economic and political relationships, between other possibilities. Likewise, science taught at school can promote a caricature or misrepresentation of science, since much is lost and not considered in the scientific knowledge's displacement to the school curricula. To discuss this with students is a way to make them aware of the problem and encourage more accurate views on both knowledges in the classrooms.

## References

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